

## ARCHITECTURAL PAINTS

- Architectural coatings contribute approximately 9 percent of total VOCs from consumer and commercial products, according to EPA estimates
- In a large-scale study for the U.S. Army's Aberdeen Proving Ground, Green Seal found that paints used at the facility that met Green Seal environmental criteria cost, on average, \$1.76 less per gallon than those that did not
- Stricter regulations and increased environmental concern have led to over a 10 percent increase in the purchase of water-based paints from 1990 to 1997, while oil-based paint purchases have decreased by 10 percent in the same time period

**A**rchitectural paint is a product that is used in and on buildings everywhere. Paint serves important functional and aesthetic purposes, but has the potential to cause both health and environmental impacts. Low level exposure to paint may irritate or burn the eyes, nose, throat and skin and cause reactions such as headaches, dizziness or nausea. These symptoms are generally mild and will subside once the immediate exposure has ceased. However, high levels of exposure to some of the elements in paint, even for a short period of time, can cause severe and lasting impacts such as kidney or liver damage or respiratory problems. Substances found in some paint, such as formaldehyde and benzene, are carcinogenic while others, such as heavy metals and phthalates, are human and ecosystem toxins.

As a protective covering, paints help to maintain surfaces and protect them from weather, wear and tear and regular cleaning. As a decorative enhancement, the

color of paint can be used to convey a company's image and can influence the energy level of people inside. These services are equally critical to a place of business as building maintenance. Although paint selection is not likely a daily endeavor, if paint purchases are made without consideration for potential human health and ecological impacts, even its periodic use can cause harm. Health and safety concerns may also have business impacts if paint products create the need to cease normal business activity while a paint job takes place or if they cause productivity declines due to worker illness.

In this issue, we discuss the potential environmental and health impacts of ingredients commonly found in architectural paints, outline the environmental criteria to use in paint selection, and offer tips for handling any excess product. We surveyed paint manufacturers to gather information on lower impact paints and evaluated the data collected against environmental

criteria in the Green Seal Environmental Standard for Architectural Coatings (GS-11). The result of this survey and evaluation is the list of recommended paints included in this report. Consider the following information when selecting your interior and exterior paints, and reap the rewards of a cleaner indoor and outdoor environment.

## Performance Matters

All paints need to perform well, both during and after they are applied. The paint should flow and level well, cover in one coat, and dry in a reasonable amount of time. When the job is complete, the coating should be easy to maintain and be able to withstand the elements. Performance is generally described according to three basic attributes: hideability, wearability and scrubability. These terms are defined below, along with likely implications of poor performance in these areas (see table).

If the paint selected does not perform well and meet performance expectations, then the area will likely need to be repainted sooner than usual. This

PERFORMANCE CHARACTERISTIC	POTENTIAL ENVIRONMENTAL IMPACT
Hideability Opacity, or the ability of the paint to cover the underlying surface.	Determines how much paint will need to be applied to the surface. Poor hideability means more paint will need to be applied. Repeated application presents a waste of money and time. If a "green" paint was used, having to use more paint counteracts some of the environmental benefits.
Wearability Durability of the painted surface when exposed to normal wear and tear.	If subject to normal use, paint should protect the surface. If the paint does not hold up, it will require more frequent painting, which defeats the purpose of using environmentally sound paint.
Scrubability Extent to which the painted surface will be able to withstand abrasion from regular cleaning.	If the surface cannot stand up to regular cleaning, it may need more frequent repainting, particularly if the area will be seen by people outside the company/facility.

rework creates environmental and health impacts because of the additional resource use and chemical releases into the environment. Paint can meet standard performance parameters, but still not satisfy "quality of life" criteria, such as a safe working environment, clean air and water, and healthy ecosystems. Exposure to paint can affect the health of people applying it as well as those working close to the area being painted. Poor employee health can damage a company's productivity and possibly its reputation. There are many products on the market that can meet both environmental and performance goals, so it is possible to make a change without sacrificing quality or price.

## Canned Goods (or "Bad")

All paints are comprised of various components that give the products substance and performance attributes that consumers look for in architectural coatings. These can be divided into the following categories:

■ **Solvents** — substances that maintain paint in proper

consistency and evaporate after application.

■ **Pigments** — compounds which lend both color and opacity to the product; the most prevalent in white paints is titanium dioxide.

■ **Binders/Resins** — base components that enable the product to adhere to the painted surface and form a film.

■ **Additives** — contribute specific qualities to the paint; additives may be used as antifreezes, fungicides and preservatives.

There are many different organic and inorganic substances found within these groups, some that are benign and others that are potentially harmful. Symptoms that people might experience from exposure to some of the chemicals in paint range from mild to severe



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Green Seal President and CEO,  
*Arthur B. Weissman*

Editor, *Debra Shepherd*

Design, *Cutting Edge Graphics*

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and depend upon the substance and quantity involved, duration of exposure, quality of air circulation and individual sensitivity. Short-term impacts from breathing solvent vapors include sensitivity of the eyes, nose, throat and skin, dizziness and nausea. Many symptoms may subside after a short time, but repeated exposure may cause chronic bronchitis or permanent damage to the liver and kidney. Long-term exposure may also lead to developmental, neurological or respiratory impairment. These impacts are more likely to affect those working directly with the paint, but some harmful ingredients will continue to be released while the paint is drying. In addition, if the painting project takes place during business hours, those in the surrounding area are directly exposed to the chemicals as well. The metals and toxic substances prohibited from the recommended paints can be found in the list below.

#### PROHIBITED INGREDIENTS

##### HEAVY METALS

Antimony  
Cadmium  
Hexavalent chromium  
Lead  
Mercury

##### TOXIC ORGANIC SUBSTANCES

Acrolein  
Acrylonitrile  
Benzene  
1,2-dichlorobenzene  
Ethylbenzene  
Butyl benzyl phthalate  
Formaldehyde  
Isophorone  
Methylene chloride  
Methyl ethyl ketone  
Methyl isobutyl ketone  
Naphthalene  
Phthalate esters  
1,1,1-trichloroethane  
Toluene  
Vinyl chloride

*According to the National Paint and Coatings Association (NPCA), waterborne paints have become increasingly valued for their reduced environmental and health impacts. Demand in the marketplace has driven manufacturers to develop improved coatings technologies. The result is latex paints with low odor, easy clean-up, and quick drying times.*

Solvents used in paints are often volatile organic compounds (VOCs), which are highly evaporative substances that are known to contribute to indoor and outdoor air pollution. Indoors, solvents are a cause of concern because they are breathed in by painters and by others inside the building as the paint is applied and as it dries. Outdoors, VOCs can react with sunlight and form ground-level ozone; a significant issue in urban areas already challenged by other sources of smog. There is also the potential for water contamination caused by improperly discarded paint, or from paint constituents leaching from landfills. Toluene (methyl benzene), a volatile organic compound that is used as a paint solvent, can affect the nervous system, kidneys, liver and heart. Naphthalene and methyl ethyl ketone, sometimes used as solvents, can damage the liver or gastrointestinal tract and may affect reproductive health. Phthalates, such as dibutyl phthalate, are sometimes added to give the paint adequate spreadability but are toxic when inhaled or ingested and can cause eye irritation or burn the skin on contact.

Heavy metals or their compounds may be used in paints as pigments, drying agents and biocides. For example, cadmium may be used to give color to the paints, and mercury compounds may be added as an element in a pigment or a fungicide to prevent mildew from forming after application. These heavy metals are neurotoxins and can damage the liver and kidney. Toxic organic substances that may cause harm to people working with or near paint include formaldehyde and toluene. Exposure to formaldehyde, a suspected carcinogen, can cause acute reactions such as irritation of the eyes, nose and throat.

## Picking Paint

Depending upon the type of paint you select, you can improve the appearance of your building and also protect human and ecological health. Here are some guidelines to help you do just that:

### Evaluate Your Needs

The first step is actually to determine whether it is necessary to paint the area. If the repainting job is specified as part of a periodic maintenance schedule,



make sure that the area is truly in need of paint before proceeding. It may be possible to postpone the project if the existing coating is intact and the area simply needs to be cleaned rather than repainted. If it is decided that the area needs to be painted, calculate the quantity of paint needed to cover the areas to be painted and purchase only the amount you will use for the project. Excess paint can become unusable if it is not stored properly or the color is not acceptable for subsequent painting needs.

### Work with Water

Paint products are generally classified as either water-based (latex) or oil-based (alkyd), according to the type of carrier used. Latex paints are preferable to alkyd paints because they use a benign solvent, water, as a carrier. Alkyd paints, on the other hand, generally utilize very volatile solvents as carriers to impart adequate application and drying characteristics to the products. Furthermore, alkyd paints require additional harmful solvents for cleaning up after the job is complete. Technological advances have enabled latex paints meet or exceed the performance of oil-based paints. In fact, one manufacturer's newsletter states that some alkyd paints, reformulated to comply with the U.S. Environmental Protection Agency's lower VOC limits for architectural and industrial maintenance coatings, may take longer to dry and yellow quicker than the original versions. The manufacturer suggests switching to a latex paint to combat the latter problem.

### Look for Low or No Volatile Organic Compounds (VOCs)

Presence of VOCs can often be detected by their strong odor, and they can irritate the eyes, nose, throat and skin. In general, low odor paints have lower VOCs than conventional paints, while quick-drying paints generally have higher VOCs, as it is the very characteristic of volatility that allows the liquid portion to evaporate leaving the solid paint film behind. Based on information provided by the manufacturers, all paints in the recommended list meet the maximum VOC levels allowed by the Green Seal standard (see table).

MAXIMUM ACCEPTABLE VOC LEVEL (g/L MINUS WATER)		
Paint Type	Interior	Exterior
Flat	50	100
Non-Flat	150	200

### Choose Paints Without Heavy Metals or Toxic Ingredients

The label on the outside of the can may indicate the presence of harmful constituents inside. A low VOC level is not the only criterion to use in paint selection. According to the Green Seal standard for paints, there are various compounds used in paint that should be restricted from the paint

you select. These substances can be replaced by less harmful ingredients without a loss of desired attributes or quality. Specific ingredients may not appear on the label, but you could review the product's material safety data sheets for the Green Seal-prohibited ingredients listed on page 3.

### Purchase Only What You Need for the Job at Hand

Paints are often sold by the gallon and the quart, which allows for more precise purchasing. Most paints cover 400 square feet per gallon, depending upon the product and application method. So use these factors to determine how much paint you will need for the area being painted.

### Work in a Well-Ventilated Area

Low VOC paints are particularly good for interior painting jobs, but adequate ventilation is always necessary. In fact, with low VOC products, work may be done during regular business hours without disrupting business operations or subjecting workers and visitors to noxious chemicals or odors. This is a selling point made by several manufacturers of low VOC paints.

### Properly Store Leftover Paint

Even when you attempt to estimate your needs, there may be paint remaining. If there is enough paint for a smaller job or to save for future touch-ups, close the can tightly to prevent it from drying out. To indicate the color inside, write the location that the color was used or put a dot of paint on the lid of the can. In colder regions, another storage consideration is that latex paints may freeze below a certain temperature.



*Continued on page 6*

## Recommended Interior Paints

PRODUCT (INTERIOR)	MANUFACTURER	VOC G/L
Safecoat Zero VOC Eggshell	American Formulating & Manufacturing	0
Safecoat Zero VOC Flat	American Formulating & Manufacturing	0
Safecoat Zero VOC Semi-Gloss	American Formulating & Manufacturing	0
Pristine Eco Spec Interior Latex Eggshell Enamel 223	Benjamin Moore	0
Pristine Eco Spec Interior Latex Flat 219	Benjamin Moore	0
Pristine Eco Spec Interior Latex Semi-Gloss Enamel 224	Benjamin Moore	0
Solvent-Free Wall Paint #18	Bioshield	0
Odorless Solvent-Free Eggshell	Coronado Paints	0
Odorless Solvent-Free Flat	Coronado Paints	0
Wonder Pure Flat	Devoe	0
Genesis Odor-Free Latex Flat	Duron Paints	0
Genesis Odor-Free Latex Semi-Gloss Enamel	Duron Paints	0
Lifemaster 2000 Eggshell	ICI Dulux	0
Lifemaster 2000 Flat	ICI Dulux	0
Lifemaster 2000 Semi-Gloss	ICI Dulux	0
Ecological Flat 2000 GS	Innovative Formulations	0
Ecological Semi-Gloss 2000 GS	Innovative Formulations	0
Enviro-Cote 1500 Flat	Kelly-Moore	0
Enviro-Cote 1510 Satin	Kelly-Moore	0
Enviro-Cote 1520 Semi-Gloss	Kelly-Moore	0
Natural Odor-Free Flat Wall Paint	McCormick Paints	0
Natural Odor-Free Low Sheen Acrylic Latex Enamel	McCormick Paints	0
Health Spec Eggshell Enamel	Sherwin-Williams	0
Health Spec Semi-Gloss Enamel	Sherwin-Williams	0
Enviro-Safe Flat	Chem-Safe Products	1
Enviro-Safe Satin	Chem-Safe Products	1
Enviro-Safe Semi-Gloss	Chem-Safe Products	1
Wonder Pure Eggshell	Devoe	3
Wonder Pure Semi-Gloss	Devoe	3
Air Care Latex Semi-Gloss	Coronado Paints	4
HealthSpec Flat Enamel	Sherwin-Williams	6
Parade Flat White	United Coatings	12
Pittsburgh Paints Solvent-Free Interior Semi-Gloss	PPG Architectural Finishes	14
Coverall Flat White	United Coatings	14
Builders Masterpiece Interior Latex Flat	Duron Paints	15
Pittsburgh Paints Solvent-Free Interior Flat	PPG Architectural Finishes	16

VOC volatile organic compounds measured in grams per litre minus water.

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## *Recommended Interior Paints (cont.)*

PRODUCT (INTERIOR)	MANUFACTURER	VOC G/L
Pittsburgh Paints Solvent-Free Eggshell	PPG Architectural Finishes	24
Speedcraft Commercial Interior Flat	PPG Architectural Finishes	31
Washable Wallplate Odor-Free Flat Enamel White	Bruning Paint	38
Supar Kote 1000 Latex Flat	Coronado Paints	41
Aladintone Satin	United Coatings	41
Speedhide Interior Latex Flat	PPG Architectural Finishes	43
Washable Wallplate Odor-Free Flat Enamel Neutral Base	Bruning Paint	44
Interior Latex Low VOC Flat	Muralo	46
P.C. Eggshell	United Coatings	46
Pittsburgh Paints Manor Hall Interior	PPG Architectural Finishes	49
Bruning Odor-Free Ceiling Flat White	Bruning Paint	50
Speedpro Semi-Gloss	PPG Architectural Finishes	51
Washable Wallplate Interior Odor-Free Latex Eggshell Enamel	Bruning Paint	73
Wallhide Interior Eggshell	PPG Architectural Finishes	74
Speedhide Interior Eggshell	PPG Architectural Finishes	88
Interior Latex Low VOC Eggshell	Muralo	89
Pittsburgh Paints Manor Hall Interior Latex Semi-Gloss	PPG Architectural Finishes	93
Satinhide Interior Semi-Gloss	PPG Architectural Finishes	93
PROMAR 400 Latex Interior Finish Semi-Gloss	Sherwin-Williams	96
New Wave Odor-Free Satin	Finnaren & Haley	100
Classic 99 Semi-Gloss	Sherwin-Williams	105
Speedhide Interior Semi-Gloss	PPG Architectural Finishes	106
Ultra Delux Interior Vinyl Acrylic Semi-Gloss Enamel	Duron Paints	116
Pittsburgh Paints Manor Hall Interior Eggshell	PPG Architectural Finishes	117
PROMAR 400 Latex Interior Finish Eg-shel	Sherwin-Williams	120
Plastic Kote Acrylic Eggshell Enamel	Duron Paints	131
Super Kote 3000 Vinyl Acrylic Semi-Gloss	Coronado Paints	135
Washable Wallplate Interior Odor-Free Latex Semi-Gloss Enamel	Bruning Paint	136
Pro Kote Supreme Latex Semi-Gloss	Duron Paints	138
Classic 99 Satin	Sherwin-Williams	144
PROMAR 200 Latex Interior Finish Eg-shel	Sherwin-Williams	144

VOC volatile organic compounds measured in grams per litre minus water.

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*Continued from page 4*

### **Remains of the Day**

Ideally, once the job is complete, there will be little leftover paint. If

you can't find alternative uses for it within your company, look for others who may need it, such as schools, day-care centers or non-profit organizations. If there is a

sufficient amount of usable paint (1/3 can is generally acceptable) it may be worth looking for paint exchanges or recycling programs that may exist in your area. These



## Recommended Exterior Paints

PRODUCT (EXTERIOR)	MANUFACTURER	VOC G/L
Decra-Shield Flat	ICI Dulux	0
Decra-Shield Satin	ICI Dulux	0
Ecological Flat 2000 GS	Innovative Formulations	0
Enviro-Safe Satin	Chem-Safe Products	1
Aquacrylic Flat	United Coatings	5
Acryclad Gloss	United Coatings	68
Acryclad	United Coatings	80
Century 2000	United Coatings	83
Sun-Proof Exterior Latex Semi-Gloss	PPG Architectural Finishes	84
Sun-Proof Exterior Flat Latex	PPG Architectural Finishes	90
Ultra Delux Exterior Latex Flat	Duron	91
65 Series Vinyl Acrylic Flat	Kelly-Moore	97
62 Series 100% Acrylic Flat	Kelly-Moore	100
A-100 Latex Finish Satin	Sherwin-Williams	108
LOWTEMP 35 Exterior Latex Satin	Sherwin-Williams	108
Super Paint Exterior House & Trim Satin	Sherwin-Williams	108
Weathershield Exterior 100% Acrylic Semi-Gloss House Paint	Duron	116
Sun-Proof Exterior Latex Satin	PPG Architectural Finishes	123
1245 AcryVelvet Eggshell	Kelly-Moore	124
Speedhide Exterior Semi-Gloss	PPG Architectural Finishes	125
Speedhide Exterior Satin	PPG Architectural Finishes	128
Storm Plate 30 Low Lustre	Finnaren & Haley	132
Super Paint Exterior House & Trim High-Gloss	Sherwin-Williams	132
Weathershield Exterior 100% Acrylic Latex Satin	Duron	139
A-100 Latex Finish Gloss	Sherwin-Williams	156
Super Paint Exterior House & Trim Gloss	Sherwin-Williams	156
Ultra Delux Exterior Latex Semi-Gloss	Duron	158
Pittsburgh Paints Manor Hall Exterior Semi-Gloss	PPG Architectural Finishes	178
Semi-Gloss House & Trim	Finnaren & Haley	190

VOC volatile organic compounds measured in grams per litre minus water.

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offer a formal way to donate, reuse or recycle usable paints.

### Recycled-Content Paint

There are two types of recycled-content paint available in the marketplace, rebledned (also

known as consolidated) and reprocessed. Both originate from post-consumer latex paint collected through public and private paint programs. As the volume of leftover paint collected by public and private sectors

increases, more government programs and paint manufacturers are becoming involved in paint recycling. Also, Federal procurement guidelines under the Resource Conservation and Recovery Act require the purchase of recycled-

content latex paint where possible, which may provide impetus for increased entry into this market.

Over 15 states have paint rebrending programs, which are often initiated by environment or waste management departments. Paint collected in these programs is combined and sold, often at lower prices than non-recycled paints. Some of these programs collaborate with paint manufacturers to process and package paint whereby the collected paint is re-mixed, screened and packaged for distribution. Reblended paint contains 100 percent post consumer content with no virgin materials such as resins and colorants added, and paints are not tested to specifications. Originally available only in beige or brown, improved matching systems for reblended paints can produce colors outside this spectrum. But even a limited color palette offers shades that are suitable for areas where bright colors are not desired. Reblended paints are well-suited to use in low-traffic areas, where color is

not important, and can be used as a base coat or to cover graffiti.

A number of paint manufacturers have ventured into paint reprocessing, whereby reblended paint is mixed with virgin raw materials such as resins and colorants. The final product contains anywhere from 20 - 100 percent recycled content and performs comparably to non-recycled paint. Reprocessed paint is generally tested to assure that products will meet performance characteristics before it is packaged for sale, but identification of specific ingredients and measurement of VOC levels is still the exception rather than the rule.

At this time, some obstacles to the widespread acceptance of paints with reclaimed materials exist. Beyond the fairly limited color range, concerns include feedstock quality, consistency of product between batches, VOC levels and chemical constituents of recycled paints. Stringent sorting protocols and testing are needed to eliminate toxic chemicals and

Although Green Seal is unable to recommend specific brands or manufacturers of recycled-content paints due to lack of technical data available, sources for these can be obtained from the Minnesota Office of Environmental Assistance at 651.215.0210 or on the EPA's procurement website at [www.epa.gov/epaoswer/non-hw/procure/products/paint.htm](http://www.epa.gov/epaoswer/non-hw/procure/products/paint.htm).

impurities. While reprocessing facilities generally perform some testing, this may be difficult particularly for municipal programs due to technical or financial constraints. Thus, recycling paint can contribute to achieving pollution prevention and waste reduction goals, yet using recycled paint may be a challenge if other environmental criteria are a concern. To address these issues, state governments such as Minnesota's are working with industry to develop paint specifications and state contracts that include environmental criteria for recycled paint.

The performance of recycled-content paints, as well as the cost savings possible from using them, have been documented in several states, most notably Minnesota and Washington. These paints have been used in maintenance facilities, municipal buildings, offices and conference areas with positive results. As virgin paint increasingly is made in a less environmentally harmful manner, the recycled-content paint that is subsequently made from it will likely improve as a result. Furthermore, continued technology improvements and success with trade products may prove to a broader audience that





recycled paints are viable for many uses, much like the evolution in acceptance of recycled-content paper.

### Minimize Disposal Impacts

When the paint or container must be discarded, be sure it is done properly. If there is not enough paint to save for future use, it can be handled in a few ways. Never pour paint down the drain. Check with local regulations on paint disposal. The National Paint and Coatings Association recommends that latex paint be poured into a paper bag to dry out and disposed of in regular trash, and the steel can may then be recycled. Alkyd (oil-based) paints must be disposed of as hazardous waste if still in liquid form, but can be disposed of with other trash if completely dried.

### A Note on Naturals

Various paint components, from pigments to resins, are being derived from renewable resources as alternatives to components of conventional architectural paints that are primarily made with synthetic materials or finite resources. For example, casein, or milk protein, is used as a binder in a few paints on the market. This meets the criteria for containing environmentally preferable raw materials, but renders the painted surface susceptible to mildew.

## MANUFACTURER CONTACT INFORMATION

COMPANY	TEL	INTERNET
American Formulating & Manufacturing	619.239.0321	www.afmsafecoat.com
Benjamin Moore	800.826.2623	www.benjaminmoore.com
Bioshield	800.621.2591	www.bioshieldpaints.com
Bruning Paint	800.852.3636	
Chem-Safe Products	210.657.5321	
Coronado Paints	904.428.6461	
Duron Paints	800.72DURON	www.duron.com
Finnaren & Haley	610.825.1900	www.fhpaint.com
ICI Dulux	800.984.5444	www.iciduluxpaints.com
Devoe	888.681.6353	www.devoepaint.com
Innovative Formulations	520.628.1553	www.mirrorseal.com
Kelly-Moore	888.677.2468	www.kellymoore.com
McCormick Paints	877.PAINT55	www.mccormickpaints.com
Muralo	800.631.3440	
Pittsburgh Paints/PPG Architectural Finishes	888.PPG.SPEC	www.ppgaf.com
Sherwin-Williams	800.524.5979	www.sherwin-williams.com
United Coatings	800.541.4383	

Thus, casein paints may be useful for some indoor uses, but should not be used on building exteriors, in highly humid regions or in areas where the finished surface will be exposed to considerable moisture (e.g., a bathroom) or require frequent cleaning.

Plant based solvents, such as d-Limonene from citrus rinds and d-Pinene from trees, have an advantage over petroleum-based ones in that they avoid utilizing a finite resource. However, some of these alternatives have VOC levels on par with petroleum based solvents. Natural solvents also have the potential to burn the eyes and skin or cause other adverse reactions like conventional solvents.

Also, these products may not be readily available or may not meet certain performance characteristics. The paints may require additional care in surface preparation, application and maintenance to achieve desired results. However, because they have other environmentally valuable attributes, they may be worth consideration for certain uses. For instance, where full coverage is not crucial, or a more hand finished look is acceptable, a paint with lower hideability may not pose a problem. When investigating alternative paints, determine your performance needs and then evaluate the options carefully. This will ensure that in selecting these paints for their environmental attributes, they will meet performance criteria as well.



1001 CONNECTICUT AVE., NW  
SUITE 827  
WASHINGTON, D.C. 20036

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## IN THIS ISSUE

- **Recommended Interior and Exterior Paints**
- *Selection*
- *Use*
- *Handling*

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## PREVENTING PAINT POLLUTION PAYS

### OFF FOR ABERDEEN PROVING GROUND

Aberdeen Proving Ground (APG), a US Army post in Maryland took a systems approach to reducing paint pollution. It included adopting a standard, testing and listing paints, implementing a paint purchasing policy, developing reuse opportunities for excess paint, reducing improper disposal, installing compliance measures and publicizing the program and its benefits.

Green Seal reviewed all 2,200 paints in use at APG against an environmental standard that included maximum VOC limits and prohibited harmful ingredients. This resulted in the elimination of duplicate or discontinued products as well those paints that did not meet the standard. The remaining 107 paints were submitted for VOC testing, and the 71 paints that passed (13%) gave APG a selection of interior and exterior paints in a variety of finishes from 13 manufacturers.

Painting contracts and purchase orders require that all paint meet APG's standard. Local paint stores were asked to cooperate in the program in exchange for encouraging just-in-time purchasing from them.

Waste paint can be brought to the post's self-help facility where it is distributed free for unit and quarters touch-up. Unused paint is contributed to a local charity which gives it to the disadvantaged. This lessens improper disposal, reduces the cost and paperwork of disposing of paint as a hazardous waste and eliminates stockpiling.

Recommended paints in this study cost an average of \$1.76 less per gallon than others. When decreased disposal costs and reduced purchases are added, total savings are estimated to be \$50,000 a year.

The Aberdeen Paint Program demonstrates how environmentally responsible purchasing can reduce impacts on the environment, make a positive contribution to the neighborhood and save money as well.

